

Department of Fisheries & Oceans
Canadian Coast Guard
Maritime & Civil Infrastructure

Fabrication of Aluminum Towers



Project No. F6839-215537
November 2021

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Title: Fabrication of Aluminum Towers

General

- 1.1 Fabrication Shop work requested to be completed by March 20th, 2022.
- 1.2 Perform all work in accordance with the Canadian Labour Code, the Canadian Welding Bureau and to all other applicable/relevant standards and/or legislation.
- 1.3 Any changes/modifications to the tower design, as per accompanying drawings, must be approved by the Canadian Coast Guard.
- 1.4 All welding and shop practices during fabrication to be in accordance with CSA W59.2-M1991 (latest edition). Welding and shop to be currently certified to W47.2 latest edition, **minimum division 2.1 or higher**. Proof (copy) of certification MUST be submitted.
- 1.5 Prior to fabrication provide list of welding personnel that will work on this project complete with proof of valid welder certification cards.
- 1.6 During fabrication and upon completion, an inspection of all work on site will be made by the Canadian Coast Guard, or duly appointed representative. Correct any and all discrepancies before shipment of towers.
- 1.7 Tower delivery to CCG Robin Hood Bay Communication Site, Sugarloaf Road, St. John's, NL. Contractor responsible for equipment to offload.
- 1.8 Final inspection and acceptance of the towers will be made after the delivery. Contractor will be responsible for any and all damage to the towers during transportation.

2.0 Scope of Work

2.1 The work to be done under this Scope of Work shall include all labour, equipment and materials necessary to properly complete the following:

2.1.1 Standard Width (1.2m wide towers)

2.1.1.1. Fabrication of Four (4) 4.5m aluminum towers as per Appendix A

2.1.1.2. Fabrication of Four (4) 6.0m aluminum towers as per Appendix A

2.1.1.3. Fabrication of One (1) 9.0m aluminum towers as per Appendix A

2.1.2 Larger Width (1.8m wide towers)

2.1.2.1. Fabrication of Four (4) 4.5m aluminum towers as per Appendix B

2.1.2.2. Fabrication of One (1) 6.0m aluminum tower as per Appendix B

2.1.2.3. Fabrication of One (1) 9.0m aluminum tower as per Appendix B

2.1.2.4. Fabrication of One (1) 12.0m aluminum tower as per Appendix B

2.1.3 All members to be punch stamped for identification.

2.1.4 All aluminum alloys to CSA S157

2.1.5 All base metal to be marine grade 6061 - T6 aluminum with the exception of:

2.1.5.1. Flat rolled plate to be marine grade 5052 - H32 aluminum

2.1.5.2. Floor grating to be marine grade 6063 - T6 aluminum

2.1.6 Welding consumables to be aluminum filler alloy 5356 to AWS/ANSI A5.10

2.1.7 Round or bevel any sharp corners and machine smooth all rough sides from cut material that may be of a safety concern for CCG

personnel working on these towers during and after installation; e.g. base plates, rails and light pedestal support plates. All cuts to be saw cuts wherever possible.

2.1.8 Calendar month and year (e.g. May 2019), tower weight and tower serial number (provided by CCG) shall be stamped/welded in 25mm high letters into the leg right of ladder and diagonal opposite, of each tower.

2.1.9 Prior to inspection, towers shall be washed down with a liquid cleaner and rinse with water. Cleaner to be Armor B-59 aluminum cleaner or approved equal. After initial inspection all deficiencies shall be corrected immediately and towers washed again to verify correction of deficiencies. All towers shall be completed before requesting inspection.

2.1.10 Towers are to be blocked during transportation to keep the weight of the base plates and distributed evenly along the tower frame. When securing the towers to the flat beds, ensure the straps are on the horizontal frames before tightening to eliminate undue stress on the tower legs.

2.1.11 Contract price to include delivery and offloading of the towers to the storage yard location.

APPENDIX A
Standard Aluminum Tower Drawings

APPENDIX B
1.8 m Wide Aluminum Tower Drawings